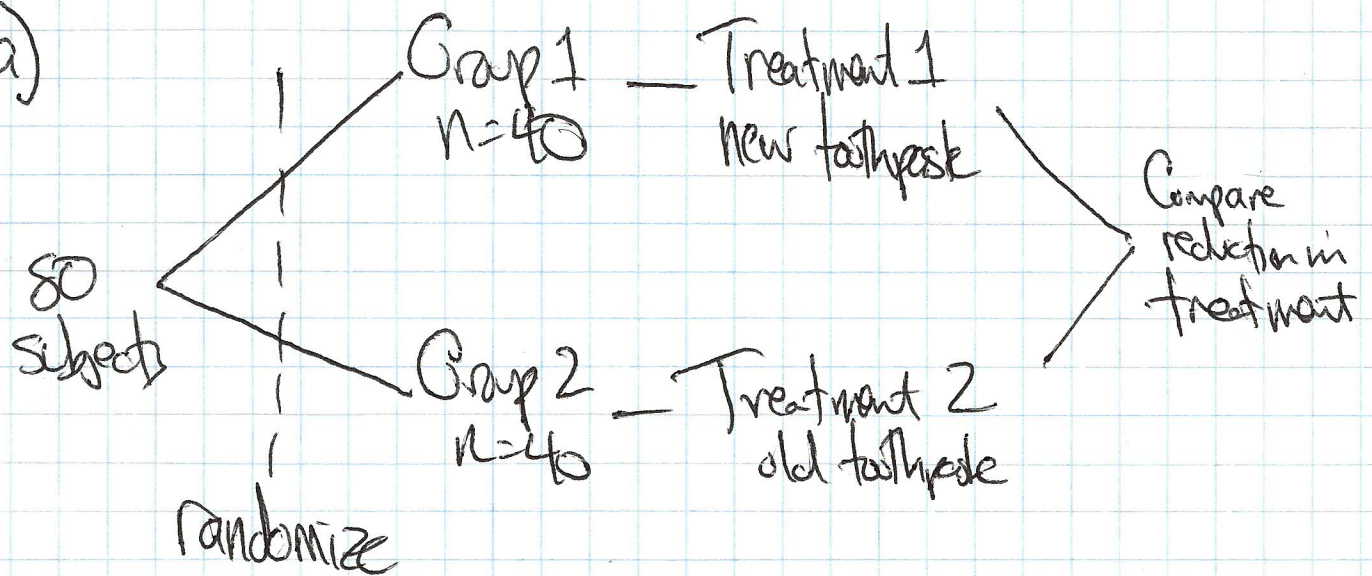


11) a)



b) It should be a double-blind experiment & neither the patient or dentist should know who has what treatment. The patient might brush better, floss better if he/she knows they are using the new toothpaste. The dentist might do a better cleaning. This reduces variation.



12 a) If they all work in the same department, they might all experience the same stress level. This could also combine w/ other confounding factors (departments facing layoffs, having busy period). Randomization would remove those confounding/hiding variables.

b) It would create a baseline to see if stress is reduced significantly when compared to doing nothing.

~~c) Also, it is an experiment but is a good representative of stress, even if there are volunteers.~~

c) Possibly, it is an experiment, but since the participants were ~~are~~ volunteers, it is hard to determine. If the volunteers are representatives, then the results can be generalized.



13) a)

<u>nutrient</u>	<u>Saline level</u>	
A	low	}
A	high	
B	low	
B	high	
C	low	
C	high	

6

b) I would randomize which tanks get which of the 6 treatments. Two tanks will get the same treatment. I would have a list of the six treatments & randomly pick a treatment for each of the 12 tanks.

c) There would not be a problem with confounding based on type of shrimp.

d) Maybe the nutrients work a certain way on tiger shrimps, but differently on other types of shrimp. There wouldn't be generalization & there would be a need for replication.